COGNITIVE STYLES AND PERSONALITY TRAITS AS PREDICTORS OF CONSCIOUSNESS AMONG UNIVERSITY STUDENTS

SYNOPSIS
FOR
PROPOSED RESEARCH WORK FOR Ph.D.
IN
PSYCHOLOGY
(2015)
SUBMITTED TO
DAYALBAGH EDUCATIONAL INSTITUTE
(DEEMED UNIVERSITY)
DAYALBAGH, AGRA-282005

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Formal education presents an avenue for exploring diverse career interests to facilitate students to discover the best choices for their skills and abilities. In the college environment, students are exposed to broad spectrum of experiences and ideas. During their educational journey they are made to become conscious about their responsibilities, preferences, choices etc. The consciousness is the most inexplicable individual phenomenon experienced by every human being more or else every moment of their life. The concept of consciousness and the states of consciousness were debated in the last century by diverse scientific schools, *viz*., psychology, cognitive science, philosophy, neuroscience, psychiatry, and lately by quantum physics (Tart, 1975; Wolman & Ullman, 1986; Baars, 1986; Penrose, 1994; Chalmers, 1996; Hameroff, Kaszniak & Scott, 1998). Yet, there is not a census about a general theory regarding consciousness. Consciousness seems to be a result of all the sub-systems of a human being, rather than being generated by the brain or by a single part of the body. However, the subject of consciousness seems to be tough to explore from mainstream scientific perspectives, as the consciousness is a very subjective experience. Moreover, even though the first-person approach seems to present valuable information, yet unfortunately the first person methods offer no scientific results, unless statistical analysis are made available (Varela & Shear, 1999; Dennett, 2001).

Brazdau in 2008 introduced the concept of Consciousness Quotient (CQ) theory in order to investigate the conscious experience. According to him, Consciousness Quotient is regarded as the general level of being conscious/ aware in one's normal life conditions. Brazdau (2008) talks about six dimensions of Consciousness in his study as follows: Physical Consciousness, Mental/Cognitive Consciousness, Emotional Consciousness, Social-relational Consciousness, Spiritual Consciousness and Self-Consciousness.

- Physical Consciousness is what a human being is conscious of sensing with his/ her physical senses whilst awake in the physical world.
- Mental Consciousness is the ability of being conscious of one's own ideas, thoughts and mental processes. In other words, it refers to the Cognitive Consciousness.
- Emotional Consciousness explains the ability of being conscious of one's emotions and feelings, and in general, to be conscious of any emotional feeling (Brazdau & Mihai, 2011).
- Social – Relational Consciousness refers to the ability of being conscious about human relationships and the associations with the people individual interact with (Brazdau & Mihai, 2011).
- The Consciousness of Self refers to the ability of being conscious about your own being, your own self; this factor depicts the ability of the reflexivity of the individual, of being able to look upon oneself in an objective way (Brazdau & Mihai, 2011).
- Spiritual Consciousness is a state of being; where all restrictive, conflicting and contradictory ideas, thoughts, feelings, beliefs, circumstances and events combine together and dissolve into harmony (Scheinfeld, 2010). It is the ultimate consciousness.

Dijksterhuis (2004) conducted a study to investigate the merits of unconscious thought in preference development and decision making. He conducted five experiments to examine the role of unconscious and conscious thought in decision making. He hypothesized that because of the low processing capacity of consciousness, conscious thought are maladaptive when making difficult decisions. On the contrary, unconscious

thought was expected to be highly effective. In the first three Experiments, participants were presented with a complex decision problem in which they had to make a choice between various alternatives, each pertaining to various attributes. The results reflected that in all the experiments the unconscious thinkers made the best decisions. In Experiments four and five, the results suggested that unconscious thought leads to clearer, more polarized, and more integrated representations in memory.

Cognitive Styles can generally be illustrated as the way in which information is acquired and processed. Cognitive Style measures do not specify the content of the information but simply how the brain perceives and processes the information. Cognitive Style is self-initiated, transitory, situational determined conscious activity for a person to organize and to control, receive and transmit information and behaviour. Cognitive Styles can be described on the basis of left versus right hemispheres of the brain, sequential or parallel processing, field dependence/independence, and spatial visualization. Cognitive Styles are constructs developed to explain perceptual traits of individuals. These styles have their bases in studies of human cognition in different standpoints (Lemes, 1988).

According to Martin (1988), there are five dimensions of Cognitive Styles: Systematic, Intuitive, Integrated, Undifferentiated and Split. However, the two dimensions of Cognitive Styles taken up for the present study are as follows:

- Systematic style- An individual recognized as having a systematic style is one who rates high on the systematic scale and low on the intuitive scale. The systematic style is associated with logical, rational behaviour that uses a well-defined sequential approach to thinking, learning, and overall plan for problem solving.
- Intuitive style- An individual rating low on the systematic scale and high on the intuitive scale is described as having an intuitive style. Someone, having an intuitive style, uses an unpredictable ordering of analytical steps when solving a problem, relies on experience patterns, and explores and discards alternatives quickly.

There have also been a few recent researches on neuropsychological measures to investigate cognitive styles. Gevins and Smith (2000) examined differences between a verbal versus nonverbal cognitive style by recording the subjects' EEGs while they performed on a spatial working memory task. The findings indicated that the individual differences that enlighten the verbal–nonverbal cognitive style extend to different patterns of neural activity in the brain but are not necessarily related to the ability to perform a particular task. Cognitive Style acts as a bridge between mental processes or intelligence and personality characteristics (Grigorenko & Sternberg, 1997; Cheema & Ridding, 1991).

Personality can be defined as a dynamic and organized set of characteristics possessed by a person that are unique to the person and influence his/her thoughts, motivations, and behaviours in various situations (Ryckman, 2004). The Five Factor Model (FFM) of personality is among the most popular descriptive models used to study personality traits (McCrae & John, 1992). This model explains the following five personality factors: Openness, Extraversion, Neuroticism, Agreeableness, and Conscientiousness. Each factor is made up of inter-correlated traits known as personality facets which measure the broad range of thoughts, behaviours and

actions that constitute each factor. Each of the five factors give rise to an average, overall dispositional tendency in the individual's thoughts, feelings and actions (Cervone et al., 2001).

- Neuroticism is defined as the predisposition to experience a range of negative effects, such as anxiety, embarrassment, personal insecurity, irritability, fear and depression. Individuals, who experience unpleasant and disturbing emotions and emotional instability, have high level of neuroticism and are more liable to experience stress in daily life than those who have low level of neuroticism.
- Extraversion can be defined for those individuals who are social, lively, cheerful, enthusiastic, optimistic and energetic. Also facets such as sociability, being friendly, fun-loving, leadership, power and willingness represent this factor.
- Openness to experiences refers to willingness to be receptive to new ideas and approaches, a powerful imagination, intellectual curiosity and multidimensional thinking.
- Agreeableness is defined as the tendency to be helpful, humble, forgiving, easy going and merciful. Individuals high on agreeableness factor concern for and love others and they are social and also they may establish emotional closeness with other people.
- Conscientiousness is defined as the tendency to be responsible, ambitious, careful, disciplined and customary (Bacanlı et al., 2009; Burger, 2006; McCrae & John, 1992; Shaver & Brennan, 1992; Somer, Korkmaz, & Tatar, 2002).

Deniz (2011) studied, "An Investigation of Decision Making Styles and the Five-Factor Personality Traits With respect To Attachment Styles." The research was aimed to investigate whether the attachment styles significantly predict the decision self-esteem, decision making styles and five-factor personality traits. Total 567 students were selected from different faculties of Selçuk University. The results depicted that the attachment styles of the students are significant predictors of their decision self-esteem, decision making styles and personality traits. The results also showed that secure attachment style is the most significant predictor of decision self-esteem and vigilance, buck-passing, procrastination scores of decision making styles. On the other hand, the most significant predictor of hyper vigilance decision making style is fearful attachment style. Secure attachment style was found to be the most significant predictor of neuroticism, extraversion, agreeableness, openness to experience sub-dimensions of personality traits and the most significant predictor of conscientiousness was preoccupied attachment style.

AIM OF THE STUDY

The aim of the present research is to investigate the relationship of Cognitive Styles and Personality traits as predictors of Consciousness among university students.

OPERATIONAL DEFINITIONS

Consciousness: It has been defined as, sentience, awareness, subjectivity, the ability to experience or to feel, wakefulness, having a sense of selfhood, and the executive control system of the mind **(Farthing, 1992).**

Cognitive Styles: According to **Messick (1984),** Cognitive Style is, "an individual's consistent approach to organising and processing information during learning".

Personality Traits: Defining Personality traits, it may be referred as dimensions of individual differences in tendencies to show consistent patterns of thought, feeling, and actions **(McCrae & Costa, 1990).**

OBJECTIVES OF THE STUDY

The objectives of the following study are:

- To study the relationship of Cognitive Styles (intuitive and systematic) and Consciousness.
- To study the relationship of Personality traits (neuroticism, extraversion, conscientiousness, agreeableness and openness to experience) and Consciousness.
- To study the relationship of Personality traits (neuroticism, extraversion, conscientiousness, agreeableness and openness to experience) and Cognitive styles (intuitive and systematic).
- To study the relative contribution of Cognitive Styles (intuitive and systematic) on Consciousness.
- To study the relative contribution of Personality traits (neuroticism, extraversion, conscientiousness, agreeableness and openness to experience) on Consciousness.

JUSTIFICATION OF THE PROBLEM

Cognitive style has been defined as the consistent way in which people process and organize information. These styles are explained as relatively stable dispositions that lead to behavioural differences in the decision-making process. Cognitive style and personality type mould our experience of the world, not only giving us perspective but also teaching us how to comprehend things that occur around us. One's cognitive style and personality type affect the way one can impress others, the decisions made, one's judgment processes, the way one handle ideas, the way problems are solved, and the way plans are prepared. Consciousness can be understood as one's ability to focus and adapt to ones functions and events. Its importance lies in the educational field because of its significance in human psychology and individual differences. Measurement of Consciousness Quotient would facilitate the students with their learning abilities. The goal of this research is to elucidate trends and perspectives in the field of cognitive style research and to recommend an integrated outline to guide future research. Moreover, the study would be helpful for the school administrators, policy makers and teachers for designing their teaching styles which would help in maximizing students learning and students in particular, to know how they can adjust themselves in today's competitive society.

HYPOTHESES

The following hypotheses are formulated for the present investigation:

- There will be a higher positive relationship between Intuitive Cognitive Style and Consciousness as compared to Systematic Cognitive Style and Consciousness.

- There will be a positive significant relationship between Conscientiousness and Consciousness.
- There will be a positive significant relationship between Openness to experience and Consciousness.
- There will be a negative significant relationship between Neuroticism and Consciousness.
- There will be a negative significant relationship between Extroversion and Consciousness.
- There will be a positive significant relationship between Agreeableness and Consciousness.
- There will be no relationship between Cognitive Styles (intuitive and systematic) and Personality traits (neuroticism, extraversion, conscientiousness, agreeableness and openness to experience).
- Contribution of Cognitive Styles (intuitive and systematic) will be positively significant in the determination of Consciousness.
- Contribution of Personality traits (neuroticism, extraversion, conscientiousness, agreeableness and openness to experience) will be positively significant in the determination of Consciousness.

VARIABLES

- **Predictor Variables**
  - ✓ Cognitive Styles
    - Systematic Cognitive Style
    - Intuitive Cognitive Style
  - ✓ Personality Traits
    - Neuroticism
    - Extroversion
    - Conscientiousness
    - Agreeableness
    - Openness
- **Criterion Variable**
  - ✓ Consciousness
- **Relevant Variables**
  - ✓ **Age**- students between 18 to 25 years will be selected for the present study
  - ✓ **Qualification**- under graduate and post graduate students will be included in the sample
  - ✓ **Sex**- both male and female students will be included in the sample

SAMPLE

The sample of the study will consist of 500 students from undergraduate and postgraduate classes of Dayalbagh Educational Institute, Deemed University, Dayalbagh, Agra, Uttar Pradesh, India, from 5 Faculties *viz*: Faculty of Social Sciences, Faculty of Education, Faculty of Science, Faculty of Commerce and Faculty of Engineering. Convenient sampling will be done.

TOOLS

- **The Consciousness Quotient Inventory (CQ-i) by Brazdau (2013).** The CQ-i evaluates the global consciousness level of an individual. The construct of CQ-i is based on 6 factors: Physical Consciousness Emotional Consciousness, Cognitive Consciousness, Spiritual Consciousness, Social – Relational Consciousness, Self-Consciousness; and also provides a general consciousness quotient. The inventory has 61 items, with the responses evaluated on a six point equal appearing type Likert Scale. The reliability analysis has a more than satisfactory internal consistency (N=62, Cronbach's Alpha =.920).

- **Cognitive Style Inventory (CSI) by Jha (2001)** will be used to identify the Cognitive Styles. The test-retest reliability of the whole test was calculated 0.39 and the full length split-half reliability of CSI was found 0.65. The Hindi version of CSI was correlated with Martin's Scale and the correlation coefficient of 0.26 was obtained.

- **The NEO-FFI Personality Inventory by Costa and McCrae (1994).** The NEO-FFI contains 60 items which are added up to measure personality at the domain level only. Each item consists of a statement rated on a Likert scale ranging from strongly disagree to strongly agree. Scale alpha reliabilities for this sample were .88 (Neuroticism), .81 (Extraversion), .74 (Openness), .77 (Agreeableness) and .87 (Conscientiousness).

DESIGN

Correlational design will be used for the present study.

STATISTICAL ANALYSIS

Multiple regression analysis will be used to analyse the raw data.

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